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Miami-Dade County

RFP No. 899

Fire Station IP Alerting System

SCOPE OF SERVICES

The County desires to acquire a Fire Station Alerting System ("System") that will interface with the County's Motorola CAD system (Premier CAD v7, formally Printrak), Motorola and Harris radio systems. Via these interfaces, the System shall be able to activate the alerting without dispatcher intervention. The System will be installed at the 72 fire stations for Miami-Dade County. The County anticipates completing some of the installations, and the Selected Proposer will install the balance of the stations. The County will also provide the cabling/wiring required for all stations. During negotiation, the County will determine the stations that will be installed by the Selected Proposer. Additionally, potential proposers are required to attend fire station site visits, which are mandatory to submission of a proposal.

A. GENERAL RESPONSIBILITIES

The Selected Proposer shall:

1. The Selected Proposer shall provide all equipment, materials, labor (optional), and supervision to provide a turnkey Fire Station Alerting System for each fire station it will install.
2. Follow all national, state, and local applicable electrical and/or building codes.
3. Be responsible for fully cooperating with Motorola CAD to implement a CAD Interface.
4. Submit its personnel for a law enforcement background check.

B. SYSTEM REQUIREMENTS

1) FIRE STATION IP ALERTING SYSTEM REQUIREMENTS:

The County requires the following of a Fire Station IP Alert System:

- a. The System shall be designed specifically for use as a fire station alerting system.
- b. The System shall have features such as escalating audio and subdued lighting at night. Vendors shall highlight their features that limit a startling effect.
- c. The System shall be compliant to the latest edition of National Fire Protection Association (NFPA) Standard 1221 regarding installation, maintenance, and use of emergency services communications systems.
- d. The System shall be able to handle a minimum of 100 individual Fire Stations and facilities, and provide for future expansion.

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- e. The System shall be capable of being activated directly from the county's Motorola CAD system.
- f. The System interface to the county's CAD system should support emergency alerts and non-emergency alerts.
- g. The System shall provide a means of notifying dispatchers that all components are properly operating; self-diagnosis, system health-check.
- h. A manual alerting application shall be provided for dispatcher use to alert stations and units and groups in the event the CAD system is not available.
- i. Uninterruptible power supplies shall be provided as an option for critical components of the System or as deemed necessary.
- j. A portable system that can be used in a temporary fire station or shelter shall be provided. Identify methods of communications.
- k. The proposed System shall be capable of alerting by: group, station, and Unit, etc.
- l. Successful Proposer shall provide four (4) spare sets of station equipment, including the parts not specifically itemized in this document necessary to meet the System operational requirements.

2) ALERTING CIRCUITS

Requirements for Altering Circuits:

- a) The primary dispatch circuits shall be monitored and a prompt warning shall be provided in the event that a situation that will impact reliability occurs, as per NFPA 1221. (System Requirement)
- b) The primary alerting circuit shall be over Miami-Dade County's Wide Area Network.
- c) The proposed system shall be capable of secondary connectivity via USB cellular modem (modem will be pre-routed with static IP).

3) DISPATCH ALERTING – GENERAL

General Requirements for Dispatch Alerting:

- a) The ability to control, at each station, the following functions:
 - i. audible tones
 - ii. lighting
 - iii. relay activation
 - iv. printer interface

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- b) The ability to provide a zoning capability such that portions of the station can be alerted without alerting the entire station.
- c) The ability to provide a means to silence all station speakers manually, with the system allowing the silenced speakers to be overridden by the receipt of a call for service.
- d) The System shall be able to process multiple alarms that may be generated during peak times in very rapid succession.

4) **DISPATCH ALERTING – AUDIBLE**

Requirements for Dispatch Alerting – Audible:

- a) The System shall provide an audible alert over the speaker system of the station. This alert shall be escalating to increase the volume from low to high over a specified amount of time.
- b) The System shall include its own audio amplifiers with full remote volume control capability on a per speaker basis.
- c) The System shall be able to integrate with amplified speakers already installed in fire stations and offer with full remote volume control capability on a per speaker basis.
- d) The System shall provide the ability to amplify building auxiliary audio such as intercom paging, telephone ringer audio, and doorbell audio through a standard type auxiliary input connection.
- e) The System shall provide the ability to mute in building auxiliary audio during dispatch alerts.
- f) The System shall include a radio interface for redundant station alerting. Each dispatched run shall have the capability to be broadcast over both the in-station alerting network and over the dispatch radio channel (on a per dispatch channel basis).
- g) For purposes of secondary monitoring, the System shall be able to broadcast, via either radio system, using the dispatcher console, active dispatches, grouped by one or more channels. This will be independent and in addition to any dispatches on operational channels or in station alerting.
- h) The radio interface shall be equipped to detect channel traffic and wait until the channel is free to begin automated dispatching.
- i) The System shall provide an audible escalating alert tone that clearly identifies to the units the type of call that is being dispatched. The alert tone shall immediately precede the dispatch announcement (per NFPA 1221). The System shall support the use of customized tones so that different tones can be used to indicate the type of call during the alert notification.

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5. DISPATCH ALERTING - AUTOMATED VOICE (TEXT TO SPEECH)

Requirements for the Dispatch Alerting – Automated Voice:

- a) The System shall have the capability, for any incident, to create voice dispatch alerts that announce simultaneously in multiple stations
- b) Should the need arise, live dispatcher voice shall be used in addition to any of or in lieu of the automated voice announcement (on 1 – 4 dispatch channels, in addition to secondary monitoring and back-up consoles).
- c) There will be a minimum of eight consoles that shall be capable of automated voice alerting in both the primary and back-up dispatch centers. Four will be active dispatch, two as dispatch hot back-ups and two for secondary monitoring. The System shall be configured such that at any time, any combination can be used for dispatcher alerting and automated voice (dispatchers shall be able to choose if they will use text to speech independent of the other consoles). These consoles may be any combination of Motorola MCC7500's and Harris Maestro IP's.
- d) Automated voice announcements supported shall include:
 - i. dispatch announcements
 - ii. announcements of move-ups/station fill-ins
 - iii. non-emergency messages
- e) The automated voice dispatch announcement shall include detailed dispatch information, including apparatus to respond, incident type, street address, and common place name.
- f) Automated voice dispatch announcements shall immediately follow the audible alert tone as per NFPA 1221.

6. DISPATCH ALERTING - RELAY CONTROLS AND INPUTS

Requirements for Dispatch Alerting – Relay Controls and Inputs:

- a) The System shall provide multiple relay contacts at each station for the purpose of controlling external switched functions. At a minimum, the contacts shall be able to be energized for a configurable period of time upon receipt of a CAD dispatch message. The outputs shall be configurable as normally open or normally closed contact closures. Additionally, the system shall easily expand the number of relay contacts. The vendor should explain how their system works with contacts, including quantity and expandability.
- b) The System shall provide multiple isolated DC inputs for the purpose of monitoring status of external actions and functions.

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7. DISPATCH ALERTING - PRINTING

System Requirements for Dispatch Alerting - Printing:

- a) The fire station alerting system shall be capable of providing a dispatch printout with the same information that is announced upon receipt of a CAD dispatch announcement. The printout must also include user comments if this information is provided to the system over the CAD interface.
- b) The System shall be compatible with our current printers and expandable to laser printers.
- c) The fire station alerting system shall support simultaneous printing and audible alerting.

8. DISPATCH ALERTING – VISUALS

Requirements for Dispatch Alerting - Visuals:

The System shall include lighting capability that is designed to have little impact on the building occupant's night vision when a call is received. This will include red LED lights in the ceiling in the bunkroom area that are bright enough to light the area around the firefighters bunk area and provide a safe amount of light to make their way to the apparatus bay.

9. CONFIGURATION AND SOFTWARE UPDATES

Requirements for Configuration and Software Updates:

The System shall be centrally managed. The Selected Proposer and MDFR's administrators shall have full, secure control access.

10. SYSTEM MONITORING REQUIREMENTS

Requirements for System Monitoring:

- a) Each component shall be monitored for on-line and off-line status.
- b) The System shall be capable of alerting support staff of critical events that occur within the alerting system via visual and email.
- c) Error and status logs shall be generated for all traffic between the CAD system and any controllers, between any controllers and the fire stations, and between all network components in the fire stations.
- d) Error and status logs shall be available to the customer's administrators and technicians via a log viewer application.

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- e) Secure remote system monitoring from a client application residing on the network (and having appropriate permissions) shall be supported.
- f) System status information shall be capable of being displayed in the County's communication center and Command and Control, in a small and large screen format.

11. INSTALLATION

- a) Miami-Dade County technical personnel reserves the right to be in the presence of each installation, system activation and cutover.
- b) Where an existing station is under renovation or a new station is under construction, the Selected Proposer shall, upon acceptance of the submitted cost proposal, be assigned to the General Contractor. The Selected Proposer shall agree to enter into a contract with the General Contractor to perform the work and will become a subcontractor to the General Contractor, executing the required contract with the General Contractor. The General Contractor for the construction contract will be responsible for the work schedule and coordination with other trades.
- c) This system is being purchased with a FEMA Assistance for Firefighters Grant. The vendor must be able to install (option) and/or deliver equipment for self-installation expeditiously upon award. Please provide a timeline for project completion.
- d) The Selected Proposer shall bring "on-line" the new alerting system as it's installed at each fire station. There will be a period of time during which the County will be operating some of its stations on the new alerting system and some on the old system.

12. TRAINING

County staff Training Requirements:

- a) Training shall be provided to the dispatchers and their supervisors by the Selected Proposer. The training schedule shall be completed on site as coordinated with Miami-Dade Fire Rescue.
- b) System maintenance, programming and troubleshooting training shall be provided for the County's technical staff.

13. SECURITY

System Security Requirements:

- a) The System shall have the ability to provide encrypted data transmitted over public networks.

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- b) The proposed system should have an audit trail of changes to include at least, but not limited to:
 - i. what changed,
 - ii. who made the change and when the change was made,
 - iii. User access to audit trail based on security level (role)

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